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ABSTRACT

Theoretical and methodological problems in researching the number of females in educational administration and changes in their numbers over time are examined in this review of pertinent studies. The studies are cited for problems that they illuminate, rather than for any possible inadequacies. The research problems fall into two broad categories: (1) access, standards, and comparability; and (2) perspective and presentation. Findings indicate that the primary problems revolve around the absence of a reliable national database or of systemic processes of data collection on a national or state level. Compounding the problem is the absence of standard categories for acquiring and reporting data and standard definitions of roles to ensure validity or respondents' answers to research questions. Problems also emerge from presentation and representation of data, suggesting the existence of perceptual screens that affect researcher objectivity. The relative absence of hard data may partially account for this perceptual diversity. (33 references) (LMI)

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THEORETICAL AND METHODOLOGICAL PROBLEMS IN RESEARCH ON FEMALES IN EDUCATIONAL ADMINISTRATION: FOCUSING ON "THE NUMBERS"

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THEORETICAL AND METHODOLOGICAL PROBLEMS IN RESEARCH ON FEMALES IN EDUCATIONAL ADMINISTRATION: FOCUSING ON "THE NUMBERS"

In 1905, Ella Flagg, the first female superintendent of a large, urban school district, and the first female president of the NEA, predicted (Hansot and Tyack, 1981):

> Women are destined to rule the schools of every city. I look for a majority of big cities to follow the lead of Chicago in choosing a woman for superintendent. In the near future we shall have more women than men in executive charge of the vast educational system. It is woman's natural field and she is no longer satisfied to do the larger part of the work and yet be denied the leadership.

Ninety-five years later, males continue to dominate school administration and the predicted dominance, no less parity, of females appears as elusive and unattainable as it must have seemed to everyone in the early part of the century except for Superintendent Flagg.

This dominance of males in school leadership has been amply documented (NEA, 1973; NCES, 1977, 1981a; Jones and Montenegro, 1982,1985; McCarthy and Zent, 1982; Ortiz, 1982; Cunningham and Hentges, 1984; Feistritzer, 1988; Mertz and McNeely, 1988a; Mertz, Venditti and McNeely, 1988). Looking at the history of schools, Hansot and Tyack (1981) described "a distinct pattern (over the last 100 years) of male hegemony in school administration." Cunningham and Hentges (1984), in a study of school superintendents for the American Association of School Administrators, concluded that "American school superintendents

continue to be overwhelmingly white and male." Feistritzer (1988), described school administration as an "old boys club," overwhelmingly male, over 45, and almost all white. And, in commenting on education's top leaders and their heirs (part of the title of his Kappan article), Kaplan (1985) argued, "The lamentable absence of women, blacks, and Hispanics from the top of the hierarchy of leadership is a commentary on how real power...transposes into leadership in education."

Equally well-established are the factors (1) that females want to become school administrators and are preparing themselves for such positions (Diaz, 1976; Ortiz and Corvell, 1978; NCES, 1977, 1981, 1985; Pavan, 1985; Edson, 1988); (2) that females face persistent barriers to their advancement in such positions (Schmuck, 1975; Valverde, 1980; Adkison, 1981; Jones and Montenegro, 1983; Lyman and Speizer, 1980; Shakeshaft, 1987); and (3) that females are moving into administrative positions (McCarthy and Zent, 1981; Jones and Montenegro, 1985; Mertz and McNeely, 1988a; Mertz, Venditti and McNeely, 1988). While researchers are moving on to pursue a number of important, intriguing questions about females in educational administration and whether male and female administrators differ in the way they perceive and perform in the role, one question about the number of females in school administration remains less clear, less firmly, less precisely answered, i.e., To what extent has the number of females in educational administration changed?

The question would seem to be easy to answer, and one might reasonably assume from a cursory reading of the literature that it has long been answered, but it has proven to be one of the most pesky, resistent, difficult questions to address, no less answer. It is not for lack of interest or effort that the question of the status and progress of females in administration is less than firmly established. Rather, that the statistical data necessary for answering the question have been and remain difficult to access and in forms that do not allow researchers to reach precise conclusions. And researchers who pursue the question unwittingly compound the problem in the methods they use to gather and report the data and in the way they approach the question.

This paper will examine theoretical and methodological problems in researching the number of females in school administration and changes in their numbers over time. Two disclaimers need to be enunciated at the outset. First, the authors make no claim that the problems identified exhaust the total range of those problems. The paper is intended to nurture the dialogue about the problem and how to solve it, as called for by Jones and Montenegro (1982). Second, it is important to make clear that this paper is not a critical review of the studies of the numbers of females in school administration. These studies represent a body of work long and painstakingly gathered under frustrating circumstances. And within themselves, they are carefully crafted.

Those studies mentioned in the paper are cited for the examples of the problems that they help to illuminate, rather than for any possible inadequacies they may contain.

The problems related to researching numbers and changes in female representation in educational administration to be addressed in this paper fall into two broad categories: problems of access, standards and comparability, and problems of perspective and presentation.

ACCESS, STANDARDS AND COMPARABILITY

The first, most obvious problem encountered in attempting to trace the place and role of females in educational administration over time is accessing the necessary data. What is required is systematic historical and current data, by comparative position, on a national and/or regional basis. The data is either not available, spottily available, non-comparative, or questionable.

There have been attempts to retrieve historical statistics about females in educational administration (Tyack and Hansot, 1982; Dale, 1973; Gribskow, 1980). While those efforts have produced some data, the data is spotty and provides some categories and not others. Given the absence of systematic reporting processes and the fact that males dominated administration to a degree that might easily preclude consideration of gender as a category of

relevance, it is unlikely that a great deal more will be learned about females in administration prior to the 1970's, except through local histories and biographical materials.

One of the primary sources of early historical data had been the National Education Association, which reported data by sex early in the century, but stopped in the 1920's (Tyack and Hansot, 1982). In 1971, it reported comprehensive, national statistical data by position as part of a salary survey (NEA, 1971). The Association repeated the study in 1973 (NEA, 1973). Those reports were highly influential and provided baseline statistics which continue to be used in assessing changes. The NEA reported data by line positions, e.g., principal, assistant principal, and by school level, i.e., elementary, junior high school, senior high school, as well as central office.

Under the impetus of civil rights legislation, the federal government began collecting statistical information from local school districts. Beginning in the seventies, the Equal Employment Opportunity Commission required school districts to report employment data by race and gender. And, they continue to do so. However, the federal government stopped reporting out the data with the 1979 statistics (NCES, 1981a). Repeated attempts to find out why the data is no longer printed as part of the statistical reports have not been successful. While they were reported, the statistics were a potentially important way to

track the progress of females in administration, however, they were flawed in their usefulness since EEOC asked for the data not by position or level, but in terms of a collapsed administrative/manager/director category. Thus everyone who fit those descriptors, whether line or staff, central office or building level, and whatever school level, was reported together. Other studies by EEOC clearly must have requested data by position, since reports of the statistics in the annual reports of The Condition of Education , e.g., 1977, report percentages of various positions. Here too, while the data is reported by position, and not just lumped into an administrator category, levels of position are not. Thus all principals are lumped together, as are all assistant principals. Since even now there are disparate numbers of principals and assistant principals by school level, such a concentration of numbers renders tracing progress difficult.

There is no systematic, national collection or monitoring of statistics about school employment other than by EEOC. Thus there is no reliable baseline data from which to track progress year to year. Jones and Montenegro (1982) found the national data to be inconsistent and haphazard and decried the lack of standardization of categories. The way in which the data has been collected makes comparisons and precise conclusions difficult.

The absence of a national data base would not be as much of a problem as it is, if State Departments of Education collected and reported the data, and did so in ways that allowed for comparisons among states. However, this does not appear to be the case. States are required to amass the data from which EEOC reports are constructed. Given the nature of federal government requests, however, the method(s) used to collect and report the data are not standardized, and it is not known what states do or. how they collect the data is just not known.

The problem is confounded by the politics of seeking data. When PEER (1979) asked states for data about the percentage of females in various school positions, 7 states, in all parts of the country, said they did not collect such data, despite the fact that they had to be reporting some of that data to EEOC. Jones and Montenegro (1982), who attempted to access data by position through the chief state school officers, reported that only 24 states and the District of Columbia had "useable information on the ethnicity and sex of superintendents, associate, deputy or assistant superintendents, principals, and administrators in general." In one state, when statistical information was sought, the researcher was told that the state did not collect such data, then that the data was not collected by position, and then, when a high department official was contacted, that the data was not tabulated collectively. The researcher was finally given data by school district in the state and told she could hand count by

position. In those reports, no standardized method of categorizing positions was evident, making it difficult, if not impossible to compare districts. The first time this state publically reported state data by position, and not all positions, was 1989.

States appear to differ from one another in the degree to which they collect, report and monitor the statistics, and in the ways they ask for and report the data. There is no central clearinghouse for such data nor any agency or driving force for the standardization or collection of the data. The data is clearly resident in the states, but accessing it and reducing it to comparative categories remain unresolved problems.

In the face of these problems, individual researchers have attempted to get at comparative data using a variety of methods. The different methods, while yielding valuable information, provide disparate, overlapping, sometimes unclear, ofttimes non-comparative results. They give us a picture of what is happening, sometimes a pretty good picture, but not a very precise one.

Scriven and Nunnery (1974) surveyed a sample of women holding central office positions in the 26 largest school districts in the country in 1973 and derived percentages of females in certain positions, e.g., assistant superintendent, director, supervisor. They reported females as 16% of the assistant superintendents in

the districts studied. This was at the same time that the NEA (1973) reported assistant superintendents as 3% nationally. Both studies provide relevant, possibly accurate information, but unclear conclusions. We do not know if the 26 districts were representative of all large school districts, or what effect their statistics had on the national data.

Cunningham and Hentges (1984) used a stratified sample of 2533 based on a total population of 15,214 superintendents to access public school superintendents. They reported that female superintendents accounted for 1.2% of the total, which would suggest 183 female superintendents in the country. They did not report this n, nor did they state how many females they sampled or how many of them responded to the survey. Jones and Montenegro (1982), under the auspices of the same agency, the American Association of School Administrators, used a total sample based on 13,715 superintendents (with 4 states only reporting samples) to reach the conclusion that females constituted 1.8% of the superintendents (n=241). While the differences in results are relatively small, questions remain about whay the studies have a different population base and different results.

Jones and Montenegro (1984) sought 1982 data about more than the superintendency. They asked about deputy, assistant and associate superintendents and principals as well. Unfortunately, this data,

either because it was asked for in this way or reported in this way, is aggregated for the two categories rather than divided by level and position. Further clouding the issue, they reported that only 41 states plus the District of Columbia provided useable data. Jones and Montenegro (1985) could trace changes in these categories when they asked for the data again a few years later, but again the manner of aggregating categories while allowing comparison with the previously collected data, did not allow precise comparison with other existing data. Further, the aggregation of categories obscured the nature of the changes within categories, e.g., by school level.

McCarthy and Zent (1980), attempting to get at the specifics of positions and discreet differences among kinds of districts, used a random sample of school districts, 2 per state for each of 4 categories, urban, suburban, medium-city and rural, in 6 different states/geographic regions. Since no female superintendents emerged in their sample, they could not say anything about that position, however, they did report the statistics about other line positions. While their data related to the districts studied, nevertheless, the percentages they provide could not be compared with either Jones and Montenegro's findings or other reports at the time, e.g., NASSP as reported by Ortiz, 1982, not because any of them were necessarily incorrect, but because they collected and reported data in different, noncomparative categories, and because they looked at the

populations under question in different ways methodologically. While the differences in results reported, even allowing for different categories, may not be very great, the differences in methods of accessing the data, differences in baseline data used, differences in the methods of collecting, aggregating and reporting the data, and the differences in conclusions reached illustrate the impact of the absence of precise, or at least commonly accepted baseline data, the difficulties in securing the data, and different methods of accessing and reporting the data on the reliability and comparability of results.

We lack a standard for defining categories, and therefore seeking and reporting data so it can be compared. Shall all secondary principals be categorized together or should junior high and senior high principals be separated? Should assistant superintendents be categorized together with deputy or associate superintendents or separated out? Should all districts in a state be aggregated for statistical purposes or separated out by kind of district, as suggested by McCarthy and Zent (1980)? Clearly, the answers to these and like questions significantly effect the precision of the results obtained and the possibilities for securing comparative data.

Mertz, Venditti, and McNeely (1988), in an attempt to build baseline data for comparative examination of change over time,

had to address the problems identified above. Since as individual researchers the cost and logistics of accessing each district, were prohibitive, they chose one category of school districts, large urban districts, to investigate, They asked each of the 48 largest school districts in the nation for statistical data about male and female position holders, by line administrative position for three points in time, 1972, 1982, and 1986, the time of data collection. The researchers used common position titles, e.g., assistant principal, elementary school, in seeking information, asked only for line, not staff positions, and provided a form to be filled in by the responding districts to guarantee standardization of category. The nature of the data allowed the researchers to compare changes that had occurred over the time period, by position, for the responding districts (44 districts provided complete data for all three time periods, in the manner requested). Baseline data for comparative purposes is thus available for those districts, and the researchers are committed to collecting the same data from the districts in 1992. While providing valuable comparative data, the study looked only at one kind of district. Mertz and McNeely (1988a) used the same data collection categories and procedure to attempt to look at the question of whether the results were idiosyncratic to urban districts or representative of the nation as a whole. Here is where the enormity of the problem of access is most clearly seen. Ideally, all kinds of school districts in all kinds of states should be accessed to truly answer the question. Accessing all of

the districts, assuming one could get an accurate number count, and categorizing of the districts by type, would be an enormous undertaking, one beyond the scope of individual researchers or even interested associations. Clearly, sampling, as used by McCarthy and Zent (1980), is the only feasible way absent a federal or coordinated state project. But once a sampling approach is chosen, the way in which the pie is sliced influences the inferences that can be drawn and the comparability of results. Mertz and McNeely (1988a) chose to concentrate on one state (versus 6 for McCarthy and Zent) and to collect data from a stratified sample of each kind of district, as defined and used by McCarthy and Zent (1980), (versus a random sample by McCarthy and Zent). They collected data from 20 districts of the various types (versus 46 for McCarthy and Zent) for the three points in time, 1972, 1982, 1986, (versus one point for McCarthy and Zent) and were able to look at changes that had occurred over time by position and type of district, given the limits of the sample. Again, they are committed to collecting the data from the same districts in 1992, and every decade thereafter, as long as funds and energy remain.

Such longitudinal studies, using the same categories, are needed to be able to determine change. However, these studies illuminate the problems in leaving it to individual researchers to try to amass the data needed. The task is too large, expensive and uncoordinated at present. Mertz and McNeely have been trying to

get others to use the same procedures in other states to build a national data base, but they have not yet made a lot of progress. And the task may be somewhat foolhardy for individual researchers.

PERSPECTIVE AND PRESENTATION

Moving away from the problems of access, standardization and comparability, one is confronted with a series of theoretical and methodological problems related to the perspective researchers bring to their studies which may influence the way they analyze and present the data and certainly influences the way in which they interpret the data. The problems are not unrelated to questions of access and standardization, and may well be aggravated, if not instigated by them, but they are sufficient in and of themselves to warrant separate attention.

Comparatively, few females have held positions of leadership in school administration. That is true whether one compares male and female position holders or the numbers of females in teaching in relation to numbers of females in administration. Because this is so, and because many of the researchers interested in tracking the progress of females have a deep concern for and commitment to increasing the number of females in administration, it may be that their perspective colors the way in which they "see" the results and translate those results to others.

The problems in interpretation and presentation emerge quickly. For example, in their study of the 44 largest school districts in the nation, Mertz, Venditti and McNeely (1988) found that the number of female superintendents had increased significantly between 1972 and 1982. One way in which the increase could have been portrayed is in terms of percent/change. Their findings showed the equivalent of a 400% increase in the number of females in superintendencies in the districts studied. Notwithstanding the legitimacy of the percent, the number itself seems large, if not staggering, and it is difficult not to be impressed by what seems to be such a major change. However, as all researchers know when interpreting percents, they can obscure the realities of numbers. In this case the increase in numbers was from 0 in 1972 to 4 in 1982. While the increase was large and significant, reporting an increase of 4 is far less dramatic than reporting an increase of 400%. The researcher needs to make a decision about which data will be reported in what way. The precept that both numbers and percentages should be reported is sometimes violated, and researchers, in interpreting their results, may sometimes be seduced by the way which fits their perspective. And subsequent studies may well pick up on that interpretation. Jones and Montenegro (1982) reported the majority of their findings in percentages only. Yeakey, Johnston and Adkison (1986), in citing the results of that study reported, "From 1974 through 1982, the percentage of white males in supervisory or administrative positions declined from 80.8% to 68.2%, while the corresponding

increase for white women rose from 11.8% to 18.9%." Without questioning the accuracy of these figures, or suggesting in any way that the authors intended to mislead the reader, in reporting the data in this way, the reviewers suggest that the number of males holding positions declined in consequence of the increase in females holding positions. But that may not be quite accurate. It is a simple matter of statistics that as the number of females increase, their proportion of the total tends to increase, therefore the percentage, but not necessarily the number of males would tend to decrease. Mertz, Venditti and McNeely (1988) learned that in an unexpected way. They found that the number and percent of females in the largest, urban school districts had increased significantly in every position save one (elementary assistant principal) 1972-1986, for an overall increase of 59%. While the percent of males declined, making it appear that far fewer males held positions than formerly, the overall decline was only 3.5%. In looking at the numbers, rather than the percents, it became clear why. The total number of positions had increased 14% during that time period, and although the percentage of males declined, their numbers just barely did.

This raises another methodological question. How should changes and trends be analyzed and interpreted? Should changes be analyzed in terms of comparisons with prior data about females, and/or in relationship to their numbers in the pool? i.e., how much progress have females made in gaining positions, or in

relation to males, i.e., What is the relationship between male and female office-holders? Does it make a difference in interpretation and presentation if one chooses one route or the other?

By far, the most pointed and poignant problems related to perception involve how researchers "see" the results. In an almost comic replication of the "half-full/half-empty" arguments, researchers see the situation half-full, i.e., progress is being made, half-empty, i.e., very little progress is being made, and without a glass, i.e., no progress is being made.

Valverde (1980) concluded, "The number of women and minorities in administrative positions in educational administration remains disproportionately low and in some cases decreasing. This trend continues despite efforts by both public and private agencies and organizations to increase the representation of these groups in educational leadership." Cunningham and Hentges (1984) concluded, "The percentage of females and minorities (in superintendencies) remains virtually unchanged compared to 10 years ago." Edson (1987), argued that the "statistics... continue to convey a discouraging picture," and that "in the last decade, women...have made only minimal gains." Interestingly enough, since Edson's study emphasized listening to the "voices" of the aspirants themselves, while she felt the gains were minimal, the majority

of her subjects were gratified and/or impressed with how far they had come.

In contrast, Jones and Montenegro (1982), while noting that females and minorities continue to be "grossly under-represented," concluded that white females, although not black females, had achieved "significant gains." In reporting on that study, Yeakey, Johnston and Adkison (1986) called the results "a small but consistent increase." Citing Feldman, Jorgensen and Poling (1988) as the basis for their position, WEEA (1990) argued that "up until the last few years,...the situation has grown steadily worse rather than better. In the years between 1928 and 1984, the number of women principals continually (emphasis added) dropped from 55 percent to 18 percent."

McCarthy and Zent (1980) concluded that the number of females had increased and that "the most striking feature of the data was the large proportion of females and minorities...among administrators hired in these districts from 1975 until 1980. It would appear that recent affirmative action efforts have reaped benefits." Mertz, Venditti and McNeely (1988) reported that the number and percent of females had increased in every line administrative position in the districts studied and that the rate of increase was greater 1982-1986, when there was a notable decline in social and legislative pressure, than in the period 1972-1982, when such pressure was highly evident. They concluded that the increasing

representation of women in administration, although still small, was a trend. Mertz and McNeely (1988a), who looked at whether the phenomena noted in the prior study was idiosyncratic to the urban districts studied or representative of all kinds of districts, looked at data by type of district in one state. They found that while there were differences by type of district and in particular positions, and of course in the actual numbers involved, the number of females were increasing in almost all positions, and they concluded that there was indeed a general trend toward the increasing representation of females.

Clearly, the problems in perception are influenced by the small numbers being considered and the lack of clarity in what the numbers actually are. Nevertheless, there are differences in the way the numbers that have been reported are viewed, and the differences seem less related to objective reality than to researcher perceptual screen.

CONCLUSIONS

This paper addressed some of the theoretical and methodological problems involved in researching the numbers of females in school administration and was intended to encourage the identification of other problems, as well as to nurture and add to a continuing dialogue about such issues. The primary problems revolve around the absence of a reliable national data base or of systematic processes in place for gathering the data on a national or state

level. Without such data, the research is perforce, incomplete, less reliable, and difficult if not impossible to use for comparative purposes. Compounding the problem is the absence of standard categories for acquiring and reporting data and standard definitions of roles to insure that the respondents are answering the question. Given these things, it is difficult if not impossible to say with precision whether and to what extent females are advancing in school administration.

Problems also emerge from the way researchers present and represent their data, ways that suggest they may be interpreting the data found through a perceptual screen that owes more to the interests and intent of the researcher than to objective reality. It may be that the primary problems are the main reason for this perceptual diversity, that the relative absence of hard data and the necessity of relying on data that depends on variations in sampling, positions studied and methodology. However,these perceptual problems may exist independently as well.

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